**3GPP TSG-CT WG1 Meeting #141e *Rev\_*C1-232290**

**Online 17 – 21 April 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.501** | **CR** | **5235** | **rev** | **1** | **Current version:** | **18.2.1** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | UAC for Multiple Events | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Apple | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc18 | | | | |  | ***Date:*** | | | 2023-04-07 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1] The specification is not clear on how the UE interprets establishment of connection when handling multiple events subject to access checks. When handling multiple access attempts for UAC, the spec has the following:  If the access attempt matches more than one operator-defined access category definition, the UE shall select the access category from the operator-defined access category definition with the lowest precedence value (see subclause 4.5.3).  NOTE: The case when an access attempt matches more than one rule includes the case when multiple events trigger an access attempt at the same time.  After deciding on the access category if the connection establishment is successful can the UE consider that the establishment is successful for all pending events? Consider the following scenario:  a) 5GMM layer gets request for connection establishment for SMS.  b) As part of connection establishment, when 5GMM checks for presence of uplink data and MMTEL sessions, both the checks return TRUE.  c) At the same time let’s also say that UE was in ATTEMPTING-REGISTRATION-UPDATE sub-state and hence needs to move to connected mode via a mobility registration.  So as part of trying to move to connected mode, we have at least 4 different events when in idle mode, whose access category can be used. As per current spec, UE picks MMTEL since that has the least rule number. The connection establishment and subsequent registration procedure is successful. At this point, can 5GMM send an establishment success to SMS originating layer as well? This needs to be clarified.  2] When UE is in 5GMM-CONNECTED mode or CONNECTED-INACTIVE mode and there is signalling (mobility registration) to be started and at the same time the UE also has other events like an MMTEL session/SMS as well pending, as per the previously provided reference, the UE would be expected to pick the access category of the rule with the least number. And that would end up being either MMTEL or SMS, in this case which have a lower rule than MO-Signalling. But when the UE is in 5GMM-CONNECTED/CONNECTED-INACTIVE mode, signalling is NOT subject to UAC. So, the UE has lesser restriction by choosing access category for MO-Signalling than by choosing access category for IMS/SMS. There seem to be two conflicting texts for this specific case where:  - At one place specification says that signalling is not subject to UAC when in CONNECTED/INACTIVE.  - At another place specification asks that the access category be chosen for the one with the lowest rule number.  Would be good to clarify that when multiple events are pending in CONNECTED/CONNECTED-INACTIVE mode and if signaling is one of them, then the UE shall choose MO-Signaling as the access category. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | - If access attempt is successful when multiple events trigger an access attempt at the same time, the access attempt is considered successful for all events that triggered the access attempt. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Ambiguous and confusing handling of multiple events subject to access checks and also for the case when signaling happens to be one of the case among multiple events. | | | | | | | | |
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| ***Clauses affected:*** | | 4.5.2, 4.5.2A | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

### 4.5.2 Determination of the access identities and access category associated with a request for access for UEs not operating in SNPN access operation mode over 3GPP access

When the UE needs to initiate an access attempt in one of the events listed in subclause 4.5.1, the UE shall determine one or more access identities from the set of standardized access identities, and one access category from the set of standardized access categories and operator-defined access categories, to be associated with that access attempt.

The set of the access identities applicable for the request is determined by the UE in the following way:

a) for each of the access identities 1, 2, 3, 11, 12, 13, 14 and 15 in table 4.5.2.1, the UE shall check whether the access identity is applicable in the selected PLMN, if a new PLMN is selected, or otherwise if it is applicable in the RPLMN or equivalent PLMN; and

b) if none of the above access identities is applicable, then access identity 0 is applicable.

Table 4.5.2.1: Access identities

|  |  |
| --- | --- |
| Access Identity number | UE configuration |
| 0 | UE is not configured with any parameters from this table |
| 1 (NOTE 1) | UE is configured for multimedia priority service (MPS). |
| 2 (NOTE 2) | UE is configured for mission critical service (MCS). |
| 3 (NOTE 4) | UE for which a disaster condition applies |
| 4-10 | Reserved for future use |
| 11 (NOTE 3) | Access Class 11 is configured in the UE. |
| 12 (NOTE 3) | Access Class 12 is configured in the UE. |
| 13 (NOTE 3) | Access Class 13 is configured in the UE. |
| 14 (NOTE 3) | Access Class 14 is configured in the UE. |
| 15 (NOTE 3) | Access Class 15 is configured in the UE. |
| NOTE 1: Access identity 1 is valid when: - the USIM file EFUAC\_AIC indicates the UE is configured for access identity 1 and the selected PLMN, if a new PLMN is selected, or RPLMN is the HPLMN (if the EHPLMN list is not present or is empty) or EHPLMN (if the EHPLMN list is present), or a visited PLMN of the home country (see the definition of home country in 3GPP TS 24.301 [15]);  - the UE receives the 5GS network feature support IE with the MPS indicator bit set to "Access identity 1 valid" from the RPLMN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4; or - the UE receives the Priority indicator IE with the MPS indicator bit set to "Access identity 1 valid" from the RPLMN as described in subclause 5.4.4.3.  NOTE 2: Access identity 2 is used by UEs configured for MCS and is valid when: - the USIM file EFUAC\_AIC indicates the UE is configured for access identity 2 and the selected PLMN, if a new PLMN is selected, or RPLMN is the HPLMN (if the EHPLMN list is not present or is empty) or EHPLMN (if the EHPLMN list is present), or a visited PLMN of the home country (see 3GPP TS 23.122 [5]); or - the UE receives the 5GS network feature support IE with the MCS indicator bit set to "Access identity 2 valid" from the RPLMN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4.  NOTE 3: Access identities 11 and 15 are valid in HPLMN (if the EHPLMN list is not present or is empty) or EHPLMN (if the EHPLMN list is present). Access Identities 12, 13 and 14 are valid in HPLMN and visited PLMNs of home country only (see the definition of home country in 3GPP TS 24.301 [15]).  NOTE 4: Access Identity 3 is valid when the UE is registering or registered for disaster roaming services (see 3GPP TS 23.122 [5]). | |

The UE uses the MPS indicator bit of the 5GS network feature support IE or the Priority indicator IE to determine if access identity 1 is valid. Processing of the MPS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message is described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4. Processing of the MPS indicator bit of the Priority indicator IE in the CONFIGURATION UPDATE COMMAND message is described in subclause 5.4.4.3. The UE shall not consider access identity 1 to be valid when the UE is not in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present) prior to receiving the MPS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message or of the Priority indicator IE in the CONFIGURATION UPDATE COMMAND message being set to "Access identity 1 valid".

When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), the contents of the USIM file EFUAC\_AIC as specified in 3GPP TS 31.102 [22] and the rules specified in table 4.5.2.1 are used to determine the applicability of access identity 1. When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), and the USIM file EFUAC\_AIC does not indicate the UE is configured for access identity 1, the UE uses the MPS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message or of the Priority indicator IE in the CONFIGURATION UPDATE COMMAND message to determine if access identity 1 is valid. When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), and the USIM file EFUAC\_AIC indicates the UE is configured for access identity 1, the MPS indicator bit of the 5GS network feature support IE and the Priority indicator IE are not applicable. When the UE is not in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), the contents of the USIM file EFUAC\_AIC are not applicable.

The UE uses the MCS indicator bit of the 5GS network feature support IE to determine if access identity 2 is valid. Processing of the MCS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message is described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4. The UE shall not consider access identity 2 to be valid when the UE is not in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present) prior to receiving the MCS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message being set to "Access identity 2 valid".

When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), the contents of the USIM file EFUAC\_AIC as specified in 3GPP TS 31.102 [22] and the rules specified in table 4.5.2.1 are used to determine the applicability of access identity 2. When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), and the USIM file EFUAC\_AIC does not indicate the UE is configured for access identity 2, the UE uses the MCS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message to determine if access identity 2 is valid. When the UE is in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), and the USIM file EFUAC\_AIC indicates the UE is configured for access identity 2, the MCS indicator bit of the 5GS network feature support IE is not applicable. When the UE is not in the country of its HPLMN or in an EHPLMN (if the EHPLMN list is present), the contents of the USIM file EFUAC\_AIC are not applicable.

The UE checks the conditions specified in subclause 4.4.3.1.1 of 3GPP TS 23.122 [5] to determine if access identity 3 is valid, and the applicability of access identity 3.

When the UE is in its HPLMN (if the EHPLMN list is not present or is empty) or in an EHPLMN (if the EHPLMN list is present), the contents of the USIM file EFACC as specified in 3GPP TS 31.102 [22] and the rules specified in table 4.5.2.1 are used to determine the applicability of access classes 11 and 15. When the UE is not in its HPLMN (if the EHPLMN list is not present or is empty) or in an EHPLMN (if the EHPLMN list is present), access classes 11 and 15 are not applicable.

When the UE is in the country of its HPLMN, the contents of the USIM file EFACC as specified in 3GPP TS 31.102 [22] and the rules specified in table 4.5.2.1 are used to determine the applicability of access classes 12 - 14. When the UE is not in the country of its HPLMN, access classes 12-14 are not applicable.

In order to determine the access category applicable for the access attempt, the NAS shall check the rules in table 4.5.2.2, and use the access category for which there is a match for barring check. If the access attempt matches more than one rule, the access category of the lowest rule number shall be selected. If the access attempt matches more than one operator-defined access category definition, the UE shall select the access category from the operator-defined access category definition with the lowest precedence value (see subclause 4.5.3).

NOTE: The case when an access attempt matches more than one rule includes the case when multiple events trigger an access attempt at the same time. If the access attempt is successful when multiple events trigger an access attempt at the same time, the access attempt is considered successful for all events that triggered the access attempt.

Table 4.5.2.2: Mapping table for access categories

|  |  |  |  |
| --- | --- | --- | --- |
| Rule # | Type of access attempt | Requirements to be met | Access Category |
| 1 | Response to paging or NOTIFICATION over non-3GPP access;  5GMM connection management procedure initiated for the purpose of transporting an LPP message without an ongoing 5GC-MO-LR procedure;  Access attempt to handover of ongoing MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access; or  Access attempt upon receipt of "call-pull-initiated" indication from the upper layers (see 3GPP TS 24.174 [13D]) | Access attempt is for MT access, or handover of ongoing MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access; or Access attempt is made upon receipt of "call-pull-initiated" (3GPP TS 24.174 [13D]) | 0 (= MT\_acc) |
| 2 | Emergency | UE is attempting access for an emergency session (NOTE 1, NOTE 2) | 2 (= emergency) |
| 3 | Access attempt for operator-defined access category | UE stores operator-defined access category definitions valid in the current PLMN as specified in subclause 4.5.3, and access attempt is matching criteria of an operator-defined access category definition | 32-63  (= based on operator classification) |
| 3.1 | Access attempt for MO exception data | UE is in NB-N1 mode and allowed to use exception data reporting (see the ExceptionDataReportingAllowed leaf of the NAS configuration MO in 3GPP TS 24.368 [17] or the USIM file EFNASCONFIG in 3GPP TS 31.102 [22]), and access attempt is for MO data or for MO signalling initiated upon receiving a request from upper layers to transmit user data related to an exceptional event. | 10 (= MO exception data) |
| 4 | Access attempt for delay tolerant service | (a) UE is configured for NAS signalling low priority or UE supporting S1 mode is configured for EAB (see the "ExtendedAccessBarring" leaf of NAS configuration MO in 3GPP TS 24.368 [17] or 3GPP TS 31.102 [22]) where "EAB override" does not apply, and  (b): the UE received one of the categories a, b or c as part of the parameters for unified access control in the broadcast system information, and the UE is a member of the broadcasted category in the selected PLMN or RPLMN/equivalent PLMN  (NOTE 3, NOTE 5, NOTE 6, NOTE 7, NOTE 8) | 1 (= delay tolerant) |
| 5 | MO MMTel voice call; or  MT MMTel voice call | Access attempt is for MO MMTel voice call or MT MMTel voice call  or for NAS signalling connection recovery during ongoing MO MMTel voice call or ongoing MT MMTel voice call (NOTE 2) | 4 (= MO MMTel voice) |
| 6 | MO MMTel video call; or  MT MMTel video call | Access attempt is for MO MMTel video call or MT MMTel video call  or for NAS signalling connection recovery during ongoing MO MMTel video call or ongoing MT MMTel video call (NOTE 2) | 5 (= MO MMTel video) |
| 7 | MO SMS over NAS or MO SMSoIP; or  MT SMSoIP | Access attempt is for MO SMS over NAS (NOTE 4) or MO SMS over SMSoIP transfer or MT SMS over SMSoIP  or for NAS signalling connection recovery during ongoing MO SMS or SMSoIP transfer or ongoing MT MMTel video call (NOTE 2) | 6 (= MO SMS and SMSoIP) |
| 7.1 | MO IMS registration related signalling | Access attempt is for MO IMS registration related signalling (e.g. IMS initial registration, re-registration, subscription refresh)  or for NAS signalling connection recovery during ongoing procedure for MO IMS registration related signalling (NOTE 2a) | 9 (= MO IMS registration related signalling) |
| 8 | UE NAS initiated 5GMM specific procedures | Access attempt is for MO signalling | 3 (= MO\_sig) |
| 8.1 | Mobile originated location request | Access attempt is for mobile originated location request (NOTE 9) | 3 (= MO\_sig) |
| 8.2 | Mobile originated signalling transaction towards the PCF | Access attempt is for mobile originated signalling transaction towards the PCF (NOTE 10) | 3 (= MO\_sig) |
| 9 | UE NAS initiated 5GMM connection management procedure or 5GMM NAS transport procedure | Access attempt is for MO data | 7 (= MO\_data) |
| 10 | An uplink user data packet is to be sent for a PDU session with suspended user-plane resources | No further requirement is to be met | 7 (= MO\_data) |
| NOTE 1: This includes 5GMM specific procedures while the service is ongoing and 5GMM connection management procedures required to establish a PDU session with request type = "initial emergency request" or "existing emergency PDU session", or to re-establish user-plane resources for such a PDU session. This further includes the service request procedure initiated with a SERVICE REQUEST message with the Service type IE set to "emergency services fallback".  NOTE 2: Access for the purpose of NAS signalling connection recovery during an ongoing service as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing service as defined in subclause 4.5.5, is mapped to the access category of the ongoing service in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.  NOTE 2a: Access for the purpose of NAS signalling connection recovery during an ongoing procedure for MO IMS registration related signalling as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing procedure for MO IMS registration related signalling as defined in subclause 4.5.5, is mapped to the access category of the MO IMS registration related signalling in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.  NOTE 3: If the UE selects a new PLMN, then the selected PLMN is used to check the membership; otherwise the UE uses the RPLMNor a PLMN equivalent to the RPLMN.  NOTE 4: This includes the 5GMM connection management procedures triggered by the UE-initiated NAS transport procedure for transporting the MO SMS.  NOTE 5: The UE configured for NAS signalling low priority is not supported in this release of specification. If a UE supporting both S1 mode and N1 mode is configured for NAS signalling low priority in S1 mode as specified in 3GPP TS 24.368 [17] or 3GPP TS 31.102 [22], the UE shall ignore the configuration for NAS signalling low priority when in N1 mode.  NOTE 6: If the access category applicable for the access attempt is 1, then the UE shall additionally determine a second access category from the range 3 to 7. If more than one access category matches, the access category of the lowest rule number shall be chosen. The UE shall use the second access category only to derive an RRC establishment cause for the access attempt.  NOTE 7: "EAB override" does not apply, if the UE is not configured to allow overriding EAB (see the "Override\_ExtendedAccessBarring" leaf of NAS configuration MO in 3GPP TS 24.368 [17] or 3GPP TS 31.102 [22]), or if NAS has not received an indication from the upper layers to override EAB and the UE does not have a PDU session that was established with EAB override.  NOTE 8: For the definition of categories a, b and c associated with access category 1, see 3GPP TS 22.261 [3]. The categories associated with access category 1 are distinct from the categories a, b and c associated with EAB (see 3GPP TS 22.011 [1A]).  NOTE 9: This includes: a) the UE-initiated NAS transport procedure for transporting a mobile originated location  request; b) the 5GMM connection management procedure triggered by a) above; and c) NAS signalling connection recovery during an ongoing 5GC-MO-LR procedure.  NOTE 10: This includes: a) the UE-initiated NAS transport procedure for transporting a mobile originated signalling  transaction towards the PCF; b) the 5GMM connection management procedure triggered by a) above; and c) NAS signalling connection recovery during an ongoing UE-requested policy provisioning procedure for V2XP, ProSeP or both (see 3GPP TS 24.587 [19B] and see 3GPP TS 24.554 [19E]). | | | |

\* \* \* Next Change \* \* \* \*

### 4.5.2A Determination of the access identities and access category associated with a request for access for UEs operating in SNPN access operation mode over 3GPP access

When the UE needs to initiate an access attempt in one of the events listed in subclause 4.5.1, the UE shall determine one or more access identities from the set of standardized access identities, and one access category from the set of standardized access categories and operator-defined access categories, to be associated with that access attempt.

The set of the access identities applicable for the request is determined by the UE in the following way:

a) for each of the access identities 1, 2, 11, 12, 13, 14 and 15 in table 4.5.2A.1, the UE shall check whether the access identity is applicable in the selected SNPN, if a new SNPN is selected, or otherwise if it is applicable in the RSNPN or equivalent SNPN; and

b) if none of the above access identities is applicable, then access identity 0 is applicable.

Table 4.5.2A.1: Access identities

|  |  |
| --- | --- |
| Access Identity number | UE configuration |
| 0 | UE is not configured with any parameters from this table |
| 1 (NOTE 1) | UE is configured for multimedia priority service (MPS). |
| 2 (NOTE 2) | UE is configured for mission critical service (MCS). |
| 3-10 | Reserved for future use |
| 11 (NOTE 3) | Access Class 11 is configured in the UE. |
| 12 (NOTE 3) | Access Class 12 is configured in the UE. |
| 13 (NOTE 3) | Access Class 13 is configured in the UE. |
| 14 (NOTE 3) | Access Class 14 is configured in the UE. |
| 15 (NOTE 3) | Access Class 15 is configured in the UE. |
| NOTE 1: Access identity 1 is valid when: - the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, indicates the UE is configured for access identity 1 in the selected SNPN, if a new SNPN is selected, or RSNPN, and the selected SNPN or the RSNPN is the subscribed SNPN, an SNPN equivalent to the subscribed SNPN, or an non-subscribed SNPN of the same country as the subscribed SNPN if the MCC of the SNPN identity of the subscribed SNPN is not the MCC of value 999;  - the UE receives the 5GS network feature support IE with the MPS indicator bit set to "Access identity 1 valid" from the RSNPN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4; or - the UE receives the Priority indicator IE with the MPS indicator bit set to "Access identity 1 valid" from the RPLMN as described in subclause 5.4.4.3.  NOTE 2: Access identity 2 is used by UEs configured for MCS and is valid when: - the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, indicates the UE is configured for access identity 2 in the selected SNPN, if a new SNPN is selected, or RSNPN, and the selected SNPN or the RSNPN is the subscribed SNPN, or an SNPN equivalent to the subscribed SNPN, or an non-subscribed SNPN of the same country as the subscribed SNPN if the MCC of the SNPN identity of the subscribed SNPN is not the MCC of value 999; or - the UE receives the 5GS network feature support IE with the MCS indicator bit set to "Access identity 2 valid" from the RSNPN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4.  NOTE 3: Access identities 11 and 15 are valid if indicated as configured for the UE in the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, in the selected SNPN, if a new SNPN is selected, or RSNPN, and the selected SNPN or the RSNPN is the subscribed SNPN. Access identities 12, 13 and 14 are valid if indicated as configured for the UE in the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, in the selected SNPN, if a new SNPN is selected, or RSNPN, and the selected SNPN or the RSNPN in the subscribed SNPN or an non-subscribed SNPN of the same country as the subscribed SNPN if the MCC of the SNPN identity of the subscribed SNPN is not the MCC of value 999. | |

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, and the rules specified in table 4.5.2A.1 are used to determine the applicability of access identity 1 in the SNPN. When the contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, do not indicate the UE is configured for access identity 1 for the SNPN, the UE uses the MPS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message and the MPS indicator bit of the Priority indicator IE in the CONFIGURATION UPDATE COMMAND message to determine if access identity 1 is valid.

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, and the rules specified in table 4.5.2A.1 are used to determine the applicability of access identity 2 in the SNPN. When the contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, do not indicate the UE is configured for access identity 2 for the SNPN, the UE uses the MCS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message to determine if access identity 2 is valid.

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]), if an entry of "list of subscriber data" is selected, or in the USIM (see 3GPP TS 31.102 [22]), if the PLMN subscription is selected, and the rules specified in table 4.5.2A.1 are used to determine the applicability of access classes 11 to 15 in the SNPN.

In order to determine the access category applicable for the access attempt, the NAS shall check the rules in table 4.5.2A.2, and use the access category for which there is a match for barring check. If the access attempt matches more than one rule, the access category of the lowest rule number shall be selected. If the access attempt matches more than one operator-defined access category definition, the UE shall select the access category from the operator-defined access category definition with the lowest precedence value (see subclause 4.5.3).

NOTE: The case when an access attempt matches more than one rule includes the case when multiple events trigger an access attempt at the same time. If the access attempt is successful when multiple events trigger an access attempt at the same time, the access attempt is considered successful for all events that triggered the access attempt.

Table 4.5.2A.2: Mapping table for access categories

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rule # | Type of access attempt | Requirements to be met | Access Category | |
| 1 | Response to paging or NOTIFICATION over non-3GPP access ;  5GMM connection management procedure initiated for the purpose of transporting an LPP message without an ongoing 5GC-MO-LR procedure;  Access attempt to handover of MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access;  Access attempt upon receipt of "call-pull-initiated" indication from the upper layers (see 3GPP TS 24.174 [13D]) | Access attempt is for MT access, handover of ongoing MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access; or  Access attempt is made upon receipt of "call-pull-initiated" indication (3GPP TS 24.174 [13D]) | 0 (= MT\_acc) | |
| 2 | Emergency | UE is attempting access for an emergency session (NOTE 1, NOTE 2) | 2 (= emergency) | |
| 3 | Access attempt for operator-defined access category | UE stores operator-defined access category definitions valid in the SNPN as specified in subclause 4.5.3, and access attempt is matching criteria of an operator-defined access category definition | 32-63  (= based on operator classification) | |
| 4 | Access attempt for delay tolerant service | (a) UE is configured for NAS signalling low priority, and  (b) the UE received one of the categories a, b or c as part of the parameters for unified access control in the broadcast system information, and the UE is a member of the broadcasted category in the selected SNPN, RSNPN or equivalent SNPN  (NOTE 3, NOTE 5, NOTE 6, NOTE 7, NOTE 8) | 1 (= delay tolerant) | |
| 5 | MO MMTel voice call; or  MT MMTel voice call | Access attempt is for MO MMTel voice call or MT MMTel voice call  or for NAS signalling connection recovery during ongoing MO MMTel voice call or ongoing MT MMTel voice call (NOTE 2) | 4 (= MO MMTel voice) |
| 6 | MO MMTel video call; or  MT MMTel video call | Access attempt is for MO MMTel video call or MT MMTel video call  or for NAS signalling connection recovery during ongoing MO MMTel video call or ongoing MT MMTel video call (NOTE 2) | 5 (= MO MMTel video) |
| 7 | MO SMS over NAS or MO SMSoIP; or  MT SMSoIP | Access attempt is for MO SMS over NAS (NOTE 4) or MO SMS over SMSoIP transfer or MT SMS over SMSoIP  or for NAS signalling connection recovery during ongoing MO SMS or SMSoIP transfer or MT SMS over SMSoIP (NOTE 2) | 6 (= MO SMS and SMSoIP) |
| 5 | MO MMTel voice call | Access attempt is for MO MMTel voice call  or for NAS signalling connection recovery during ongoing MO MMTel voice call (NOTE 2) | 4 (= MO MMTel voice) | |
| 6 | MO MMTel video call | Access attempt is for MO MMTel video call  or for NAS signalling connection recovery during ongoing MO MMTel video call (NOTE 2) | 5 (= MO MMTel video) | |
| 7 | MO SMS over NAS or MO SMSoIP | Access attempt is for MO SMS over NAS (NOTE 4) or MO SMS over SMSoIP transfer  or for NAS signalling connection recovery during ongoing MO SMS or SMSoIP transfer (NOTE 2) | 6 (= MO SMS and SMSoIP) | |
| 7.1 | MO IMS registration related signalling | Access attempt is for MO IMS registration related signalling (e.g. IMS initial registration, re-registration, subscription refresh)  or for NAS signalling connection recovery during ongoing procedure for MO IMS registration related signalling (NOTE 2a) | 9 (= MO IMS registration related signalling) | |
| 8 | UE NAS initiated 5GMM specific procedures | Access attempt is for MO signalling | 3 (= MO\_sig) | |
| 8.1 | Mobile originated location request | Access attempt is for mobile originated location request (NOTE 9) | 3 (= MO\_sig) | |
| 8.2 | Mobile originated signalling transaction towards the PCF | Access attempt is for mobile originated signalling transaction towards the PCF (NOTE 10) | 3 (= MO\_sig) | |
| 9 | UE NAS initiated 5GMM connection management procedure or 5GMM NAS transport procedure | Access attempt is for MO data | 7 (= MO\_data) | |
| 10 | An uplink user data packet is to be sent for a PDU session with suspended user-plane resources | No further requirement is to be met | 7 (= MO\_data) | |
| NOTE 1: Void  NOTE 2: Access for the purpose of NAS signalling connection recovery during an ongoing service as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing service as defined in subclause 4.5.5, is mapped to the access category of the ongoing service in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.  NOTE 2a: Access for the purpose of NAS signalling connection recovery during an ongoing MO IMS registration related signalling as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing MO IMS registration related signalling as defined in subclause 4.5.5, is mapped to the access category of the MO IMS registration related signalling in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.  NOTE 3: If the UE selects a new SNPN, then the selected SNPN is used to check the membership; otherwise the UE uses the RSNPN or an SNPN equivalent to the RSNPN.  NOTE 4: This includes the 5GMM connection management procedures triggered by the UE-initiated NAS transport procedure for transporting the MO SMS.  NOTE 5: The UE configured for NAS signalling low priority is not supported in this release of specification.  NOTE 6: If the access category applicable for the access attempt is 1, then the UE shall additionally determine a second access category from the range 3 to 7. If more than one access category matches, the access category of the lowest rule number shall be chosen. The UE shall use the second access category only to derive an RRC establishment cause for the access attempt.  NOTE 7: Void.  NOTE 8: For the definition of categories a, b and c associated with access category 1, see 3GPP TS 22.261 [3]. The categories associated with access category 1 are distinct from the categories a, b and c associated with EAB (see 3GPP TS 22.011 [1A]).  NOTE 9: This includes: a) the UE-initiated NAS transport procedure for transporting a mobile originated location  request; b) the 5GMM connection management procedure triggered by a) above; and c) NAS signalling connection recovery during an ongoing 5GC-MO-LR procedure.  NOTE 10: This includes: a) the UE-initiated NAS transport procedure for transporting a mobile originated signalling  transaction towards the PCF; b) the 5GMM connection management procedure triggered by a) above; and c) NAS signalling connection recovery during an ongoing UE-requested policy provisioning procedure for V2XP (see 3GPP TS 24.587 [19B]).  . | | | | |

\* \* \* End of Changes \* \* \* \*